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Response to First Office Action of Nov. 3, 2003

Amendments to the Claims

This listing will replace all prior versions, and listings, of claims in the application:

Claim 1 (Currently Amended): A system for transferring spent nuclear fuel to a cask comprising:

a cask having a horizontal cross-section for receiving the spent nuclear fuel;

a below grade opening adapted for receiving a the cask;

a cask support means positioned within the opening, the cask support means capable of vertical movement;-and

means for vertically moving the cask support means;

wherein the cask support means is capable of lowering the cask within the opening; and

a shell forming walls of the opening, the shell having a horizontal cross section that is slightly larger than the horizontal cross section of the cask.

Claim 2 (Cancelled).

Claim 3 (Cancelled).

Claim 4 (Currently Amended) The system of claim 1 ~~3~~ wherein the shell and the cask are cylindrical.

Claim 5 (Original) The system of claim 1 wherein the means for vertically moving the cask support means is at least two lifting jacks.

Claim 6 (Original) The system of claim 5 wherein the plurality of lifting jacks are coupled so as to keep the cask support means approximately level during vertical movement.

Claim 7 (Original) The system of claim 5 wherein the number of lifting jacks is three.

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Claim 8 (Original) The system of claim 5 wherein the jacks are located outside the opening and are accessible from grade level.

Claim 9 (Original) The system of claim 1 wherein the cask support means has a fully lowered position and a fully raised position.

Claim 10 (Original) The system of claim 9 wherein when the cask support means is in the fully raised position the cask support means is below grade.

Claim 11 (Original) The system of claim 9 wherein when the cask support means is in the fully lowered position and supporting a cask having a height, at least a major portion of the cask's height is below grade level.

Claim 12 (Currently Amended): A The system of claim 11 for transferring spent nuclear fuel comprising:

a below grade opening adapted for receiving a cask;

a cask support means positioned within the opening, the cask support means capable of vertical movement between a fully lowered position and fully raised position;

means for vertically moving the cask support means;

the cask support means capable of lowering the cask within the opening

wherein when the cask support means is in the fully lowered position and supporting the cask, wherein approximately 30 inches of the cask is above grade level.

Claim 13 (Original) The system of claim 1 wherein the opening has a bottom, the system further comprising a setdown structure positioned at the bottom of the opening and below the cask support means.

Claim 14 (Currently Amended): A The system of claim 13 for transferring spent nuclear fuel comprising:

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a below grade opening having a bottom and adapted for receiving a cask;

a cask support means positioned within the opening, the cask support means capable of vertical movement;

means for vertically moving the cask support means;

the cask support means capable of lowering the cask within the opening;

a setdown structure positioned at the bottom of the opening and below the cask support means; and

wherein when the cask support means is in a fully lowered position, the cask support means contacts the setdown structure and the cask support means and any load being borne by the cask support means is supported by the setdown structure.

Claim 15 (Original) The system of claim 1 wherein the cask support means is a platform having a center and a top surface.

Claim 16 (Currently Amended): A The system of claim 15 for transferring spent nuclear fuel comprising:

a below grade opening adapted for receiving a cask;

a platform for supporting the cask, the platform positioned within the opening and capable of vertical movement;

means for vertically moving the platform;

the platform capable of lowering the cask within the opening;

the platform having a center, a top surface wherein the cask support means has a hole near the center, and a plurality of cask positioning plates on the top surface.

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Claim 17 (Original) The system of claim 1 further including vertical guide rods on which the cask support means can move.

Claim 18 (Currently Amended) A The system of claim 17 for transferring spent nuclear fuel comprising:

a below grade opening adapted for receiving a cask;

a cask support means positioned within the opening, the cask support means capable of vertical movement; and

means for vertically moving the cask support means;

wherein the cask support means is capable of lowering the cask within the opening.

vertical guide rods on which the cask support means can move; and

wherein the vertical guide rods have a top and a bottom, the vertical guide rods being secured at the top so that upon loading the cask support means the vertical guide rods are in tension.

Claims 19-38 (Withdrawn)

Claim 39 (New) The system of claim 1 wherein when the cask is positioned in the opening, the horizontal cross section of the shell is substantially concentric with the horizontal cross section of the cask.

Claim 40 (New) The system of claim 1 wherein when the cask is positioned in the opening, a tight clearance is formed between the shell and the cask.

Claim 41 (New) A system for transferring spent nuclear fuel comprising:

a below grade opening adapted for receiving a cask;

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a cask support means positioned within the opening, the cask support means capable of vertical movement between a fully lowered position and fully raised position;

means for vertically moving the cask support means;

the cask support means capable of lowering the cask within the opening;

wherein when the cask support means is in the fully lowered position and supporting the cask, a portion of the cask is above grade level.